

105TH CONGRESS  
1ST SESSION

# H. R. 1903

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IN THE SENATE OF THE UNITED STATES

SEPTEMBER 17, 1997

Received; read twice and referred to the Committee on Commerce, Science,  
and Transportation

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## AN ACT

To amend the National Institute of Standards and Technology Act to enhance the ability of the National Institute of Standards and Technology to improve computer security, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2       This Act may be cited as the “Computer Security En-  
3 hancement Act of 1997”.

4 **SEC. 2. FINDINGS AND PURPOSES.**

5       (a) FINDINGS.—The Congress finds the following:

6           (1) The National Institute of Standards and  
7 Technology has responsibility for developing stand-  
8 ards and guidelines needed to ensure the cost-effec-  
9 tive security and privacy of sensitive information in  
10 Federal computer systems.

11          (2) The Federal Government has an important  
12 role in ensuring the protection of sensitive, but un-  
13 classified, information controlled by Federal agen-  
14 cies.

15          (3) Technology that is based on the application  
16 of cryptography exists and can be readily provided  
17 by private sector companies to ensure the confiden-  
18 tiality, authenticity, and integrity of information as-  
19 sociated with public and private activities.

20          (4) The development and use of encryption  
21 technologies should be driven by market forces rath-  
22 er than by Government imposed requirements.

23          (5) Federal policy for control of the export of  
24 encryption technologies should be determined in  
25 light of the public availability of comparable  
26 encryption technologies outside of the United States

1 in order to avoid harming the competitiveness of  
2 United States computer hardware and software com-  
3 panies.

4 (b) PURPOSES.—The purposes of this Act are to—

5 (1) reinforce the role of the National Institute  
6 of Standards and Technology in ensuring the secu-  
7 rity of unclassified information in Federal computer  
8 systems;

9 (2) promote technology solutions based on pri-  
10 vate sector offerings to protect the security of Fed-  
11 eral computer systems; and

12 (3) provide the assessment of the capabilities of  
13 information security products incorporating cryptog-  
14 raphy that are generally available outside the United  
15 States.

16 **SEC. 3. VOLUNTARY STANDARDS FOR PUBLIC KEY MAN-**  
17 **AGEMENT INFRASTRUCTURE.**

18 Section 20(b) of the National Institute of Standards  
19 and Technology Act (15 U.S.C. 278g–3(b)) is amended—

20 (1) by redesignating paragraphs (2), (3), (4),  
21 and (5) as paragraphs (3), (4), (7), and (8), respec-  
22 tively; and

23 (2) by inserting after paragraph (1) the follow-  
24 ing new paragraph:

1           “(2) upon request from the private sector, to  
2           assist in establishing voluntary interoperable stand-  
3           ards, guidelines, and associated methods and tech-  
4           niques to facilitate and expedite the establishment of  
5           non-Federal management infrastructures for public  
6           keys that can be used to communicate with and con-  
7           duct transactions with the Federal Government;”.

8   **SEC. 4. SECURITY OF FEDERAL COMPUTERS AND NET-**  
9           **WORKS.**

10          Section 20(b) of the National Institute of Standards  
11   and Technology Act (15 U.S.C. 278g–3(b)), as amended  
12   by section 3 of this Act, is further amended by inserting  
13   after paragraph (4), as so redesignated by section 3(1)  
14   of this Act, the following new paragraphs:

15           “(5) to provide guidance and assistance to Fed-  
16   eral agencies in the protection of interconnected  
17   computer systems and to coordinate Federal re-  
18   sponse efforts related to unauthorized access to Fed-  
19   eral computer systems;

20           “(6) to perform evaluations and tests of—

21                   “(A) information technologies to assess se-  
22                   curity vulnerabilities; and

23                   “(B) commercially available security prod-  
24                   ucts for their suitability for use by Federal

1 agencies for protecting sensitive information in  
2 computer systems;”.

3 **SEC. 5. COMPUTER SECURITY IMPLEMENTATION.**

4 Section 20 of the National Institute of Standards and  
5 Technology Act (15 U.S.C. 278g–3) is further amended—

6 (1) by redesignating subsections (c) and (d) as  
7 subsections (e) and (f), respectively; and

8 (2) by inserting after subsection (b) the follow-  
9 ing new subsection:

10 “(c) In carrying out subsection (a)(3), the Institute  
11 shall—

12 “(1) emphasize the development of technology-  
13 neutral policy guidelines for computer security prac-  
14 tices by the Federal agencies;

15 “(2) actively promote the use of commercially  
16 available products to provide for the security and  
17 privacy of sensitive information in Federal computer  
18 systems; and

19 “(3) participate in implementations of  
20 encryption technologies in order to develop required  
21 standards and guidelines for Federal computer sys-  
22 tems, including assessing the desirability of and the  
23 costs associated with establishing and managing key  
24 recovery infrastructures for Federal Government in-  
25 formation.”.

1   **SEC. 6. COMPUTER SECURITY REVIEW, PUBLIC MEETINGS,**  
2                   **AND INFORMATION.**

3           Section 20 of the National Institute of Standards and  
4   Technology Act (15 U.S.C. 278g-3), as amended by this  
5   Act, is further amended by inserting after subsection (c),  
6   as added by section 5 of this Act, the following new sub-  
7   section:

8           “(d)(1) The Institute shall solicit the recommenda-  
9   tions of the Computer System Security and Privacy Advi-  
10   sory Board, established by section 21, regarding standards  
11   and guidelines that are being considered for submittal to  
12   the Secretary of Commerce in accordance with subsection  
13   (a)(4). No standards or guidelines shall be submitted to  
14   the Secretary prior to the receipt by the Institute of the  
15   Board’s written recommendations. The recommendations  
16   of the Board shall accompany standards and guidelines  
17   submitted to the Secretary.

18          “(2) There are authorized to be appropriated to the  
19   Secretary of Commerce \$1,000,000 for fiscal year 1998  
20   and \$1,030,000 for fiscal year 1999 to enable the Com-  
21   puter System Security and Privacy Advisory Board, estab-  
22   lished by section 21, to identify emerging issues related  
23   to computer security, privacy, and cryptography and to  
24   convene public meetings on those subjects, receive presen-  
25   tations, and publish reports, digests, and summaries for  
26   public distribution on those subjects.”.

1 **SEC. 7. LIMITATION ON PARTICIPATION IN REQUIRING**  
2 **ENCRYPTION STANDARDS.**

3 Section 20 of the National Institute of Standards and  
4 Technology Act (15 U.S.C. 278g–3), as amended by this  
5 Act, is further amended by adding at the end the following  
6 new subsection:

7 “(g) The Institute shall not promulgate, enforce, or  
8 otherwise adopt standards, or carry out activities or poli-  
9 cies, for the Federal establishment of encryption standards  
10 required for use in computer systems other than Federal  
11 Government computer systems.”.

12 **SEC. 8. MISCELLANEOUS AMENDMENTS.**

13 Section 20 of the National Institute of Standards and  
14 Technology Act (15 U.S.C. 278g–3), as amended by this  
15 Act, is further amended—

16 (1) in subsection (b)(8), as so redesignated by  
17 section 3(1) of this Act, by inserting “to the extent  
18 that such coordination will improve computer secu-  
19 rity and to the extent necessary for improving such  
20 security for Federal computer systems” after “Man-  
21 agement and Budget”;

22 (2) in subsection (e), as so redesignated by sec-  
23 tion 5(1) of this Act, by striking “shall draw upon”  
24 and inserting in lieu thereof “may draw upon”;

1           (3) in subsection (e)(2), as so redesignated by  
2           section 5(1) of this Act, by striking “(b)(5)” and in-  
3           serting in lieu thereof “(b)(8)”; and

4           (4) in subsection (f)(1)(B)(i), as so redesign-  
5           ated by section 5(1) of this Act, by inserting “and  
6           computer networks” after “computers”.

7   **SEC. 9. FEDERAL COMPUTER SYSTEM SECURITY TRAINING.**

8           Section 5(b) of the Computer Security Act of 1987  
9   (49 U.S.C. 759 note) is amended—

10           (1) by striking “and” at the end of paragraph  
11           (1);

12           (2) by striking the period at the end of para-  
13           graph (2) and inserting in lieu thereof “; and”; and

14           (3) by adding at the end the following new  
15           paragraph:

16           “(3) to include emphasis on protecting sensitive  
17           information in Federal databases and Federal com-  
18           puter sites that are accessible through public net-  
19           works.”.

20   **SEC. 10. COMPUTER SECURITY FELLOWSHIP PROGRAM.**

21           There are authorized to be appropriated to the Sec-  
22   retary of Commerce \$250,000 for fiscal year 1998 and  
23   \$500,000 for fiscal year 1999 for the Director of the Na-  
24   tional Institute of Standards and Technology for fellow-  
25   ships, subject to the provisions of section 18 of the Na-



1 tional Institute of Standards and Technology Act (15  
2 U.S.C. 278g–1), to support students at institutions of  
3 higher learning in computer security. Amounts authorized  
4 by this section shall not be subject to the percentage limi-  
5 tation stated in such section 18.

6 **SEC. 11. STUDY OF PUBLIC KEY INFRASTRUCTURE BY THE**  
7 **NATIONAL RESEARCH COUNCIL.**

8 (a) REVIEW BY NATIONAL RESEARCH COUNCIL.—  
9 Not later than 90 days after the date of the enactment  
10 of this Act, the Secretary of Commerce shall enter into  
11 a contract with the National Research Council of the Na-  
12 tional Academy of Sciences to conduct a study of public  
13 key infrastructures for use by individuals, businesses, and  
14 government.

15 (b) CONTENTS.—The study referred to in subsection  
16 (a) shall—

17 (1) assess technology needed to support public  
18 key infrastructures;

19 (2) assess current public and private plans for  
20 the deployment of public key infrastructures;

21 (3) assess interoperability, scalability, and in-  
22 tegrity of private and public entities that are ele-  
23 ments of public key infrastructures;

24 (4) make recommendations for Federal legisla-  
25 tion and other Federal actions required to ensure

1 the national feasibility and utility of public key in-  
2 frastructures; and

3 (5) address such other matters as the National  
4 Research Council considers relevant to the issues of  
5 public key infrastructure.

6 (c) INTERAGENCY COOPERATION WITH STUDY.—All  
7 agencies of the Federal Government shall cooperate fully  
8 with the National Research Council in its activities in car-  
9 rying out the study under this section, including access  
10 by properly cleared individuals to classified information if  
11 necessary.

12 (d) REPORT.—Not later than 18 months after the  
13 date of the enactment of this Act, the Secretary of Com-  
14 merce shall transmit to the Committee on Science of the  
15 House of Representatives and the Committee on Com-  
16 merce, Science, and Transportation of the Senate a report  
17 setting forth the findings, conclusions, and recommenda-  
18 tions of the National Research Council for public policy  
19 related to public key infrastructures for use by individuals,  
20 businesses, and government. Such report shall be submit-  
21 ted in unclassified form.

22 (e) AUTHORIZATION OF APPROPRIATIONS.—There  
23 are authorized to be appropriated to the Secretary of Com-  
24 merce \$450,000 for fiscal year 1998, to remain available  
25 until expended, for carrying out this section.

1 **SEC. 12. PROMOTION OF NATIONAL INFORMATION SECU-**  
2 **RITY.**

3 The Under Secretary of Commerce for Technology  
4 shall—

5 (1) promote the more widespread use of appli-  
6 cations of cryptography and associated technologies  
7 to enhance the security of the Nation's information  
8 infrastructure;

9 (2) establish a central clearinghouse for the col-  
10 lection by the Federal Government and dissemina-  
11 tion to the public of information to promote aware-  
12 ness of information security threats; and

13 (3) promote the development of the national,  
14 standards-based infrastructure needed to support  
15 commercial and private uses of encryption tech-  
16 nologies for confidentiality and authentication.

17 **SEC. 13. DIGITAL SIGNATURE INFRASTRUCTURE.**

18 (a) NATIONAL POLICY PANEL.—The Under Sec-  
19 retary of Commerce for Technology shall establish a Na-  
20 tional Policy Panel for Digital Signatures. The Panel shall  
21 be composed of nongovernment and government technical  
22 and legal experts on the implementation of digital signa-  
23 ture technologies, individuals from companies offering dig-  
24 ital signature products and services, State officials, includ-  
25 ing officials from States which have enacted statutes es-

1 tablishing digital signature infrastructures, and represent-  
2 ative individuals from the interested public.

3 (b) RESPONSIBILITIES.—The Panel established  
4 under subsection (a) shall serve as a forum for exploring  
5 all relevant factors associated with the development of a  
6 national digital signature infrastructure based on uniform  
7 standards that will enable the widespread availability and  
8 use of digital signature systems. The Panel shall develop—

9 (1) model practices and procedures for certifi-  
10 cation authorities to ensure accuracy, reliability, and  
11 security of operations associated with issuing and  
12 managing certificates;

13 (2) standards to ensure consistency among ju-  
14 risdictions that license certification authorities; and

15 (3) audit standards for certification authorities.

16 (c) ADMINISTRATIVE SUPPORT.—The Under Sec-  
17 retary of Commerce for Technology shall provide adminis-  
18 trative support to the Panel established under subsection  
19 (a) of this section as necessary to enable the Panel to  
20 carry out its responsibilities.

21 **SEC. 14. SOURCE OF AUTHORIZATIONS.**

22 Amounts authorized to be appropriated by this Act  
23 shall be derived from amounts authorized under the Na-

1 tional Institute of Standards and Technology Authoriza-  
2 tion Act of 1997.

Passed the House of Representatives September 16,  
1997.

Attest:

ROBIN H. CARLE,  
*Clerk.*